AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method for sending a signal implementing Nt transmit antennas, with $Nt \geq 2$, wherein the method implements the following steps, for at least one vector comprising N symbols to be sent:

~~formed by successive vectors each comprising N symbols to be sent, and implementing at least two transmitter antennas,~~

~~wherein a distinct sub-matrix is associated with each of said antennas, said sub-matrices being obtained by subdivision of a unitary square matrix, and each of said antennas sends sub-vectors, obtained by subdivision of said vectors, respectively multiplied by said sub-matrices,~~

~~so as to form, as seen from a receiver, a single combined signal representing the multiplication of said vectors by said unitary matrix~~

dividing said vector into Nt sub-vectors;

multiplying each of the Nt sub-vectors by a distinct sub-matrice, each sub-matrix being associated with one of the transmit antennas, and said sub-matrices being obtained by subdivision of a unitary square matrix; and

sending, from the Nt transmit antennas, the Nt sub-vectors resulting from the multiplying step.

2. (Currently Amended) The method according to claim 1, ~~implementing Nt antennas,~~ wherein each of said sub-matrices has a size of (N/Nt) x N.

3. (Previously Presented) The method according to claim 2, wherein N/Nt is greater than or equal to 2.

4. (Previously Presented) The method according to claim 1, wherein said unitary matrix is full.

5. (Currently Amended) The method according to claim 1, wherein said unitary matrix belongs to the group comprising:

- ~~the~~ real Hadamard matrices;
- ~~the~~ complex Hadamard matrices;
- ~~the~~ Fourier matrices;
- ~~the~~ real rotation matrices;
- ~~the~~ complex rotation matrices.

6. (Currently Amended) The method according to claim 1, wherein the method implements two transmitter antennas and said sub-matrices have a value of [1 1] and [1 -1].

7. (Previously Presented) The method according to claim 1, wherein the method implements two transmitter antennas and said sub-matrices have a value of $\frac{1}{\sqrt{2}}\begin{bmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \end{bmatrix}$ and $\frac{1}{\sqrt{2}}\begin{bmatrix} 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 \end{bmatrix}$.

8. (Previously Presented) The method according to claim 1, wherein the method implements four transmitter antennas and said sub-matrices have a value of [1 1 1 1], [1 -1 1 -1], [1 1 -1 -1] and [1 -1 -1 1].

9. (Currently Amended) A method for ~~the~~ reception of a signal corresponding to ~~the~~ a combination of contributions of Nt transmit antennas, with $Nt \geq 2$, wherein for at least one vector comprising N symbols to be sent, the signal is generated by dividing said vector into Nt sub-vectors, multiplying each of the Nt sub-vectors by a distinct sub-matrice, each sub-matrix being associated with one of the transmit antennas, and said sub-matrices being obtained by subdivision of a unitary square matrix, and sending, from the Nt transmit antennas, the Nt sub-

vectors resulting from the multiplying step, ~~each of at least two transmitter antennas, a distinct sub matrix being associated with each of said antennas, said sub matrices being obtained by subdivision of a unitary square matrix, wherein each of said antennas sends sub-vectors, obtained by subdivision of said vectors, respectively multiplied by said sub matrices, and~~ wherein the signal forms, seen from a receiver, a single combined signal representing the multiplication ~~of said vectors by said unitary matrix~~, wherein the method of reception comprises:

~~implements~~implementing at least one receiver antenna~~,~~;

~~receives~~receiving said single combined signal on each of said receiver antennas~~,~~; and

~~decode~~decoding said single combined signal by ~~means of the~~ a decoding matrix corresponding to a matrix that is the conjugate transpose of said unitary matrix.

10. (Currently Amended) The method according to claim 9, wherein a maximum likelihood decoding is applied to ~~the~~ data coming from ~~the~~ multiplication by said conjugate transpose matrix.

11. (Cancelled)